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Climate Leader Lunch Hangout

Presented by: Lea Ranalder, Climate Change and Urban Environment Team

Date: 16 May 2024

This session will cover

- Status of the energy transition
- Who is “responsible” for the climate crisis?
- Who can solve it?
- One actor: cities?
- How can we communicate better about the opportunities for renewables?
- Why we need youth and opportunities

Status of the Energy transition

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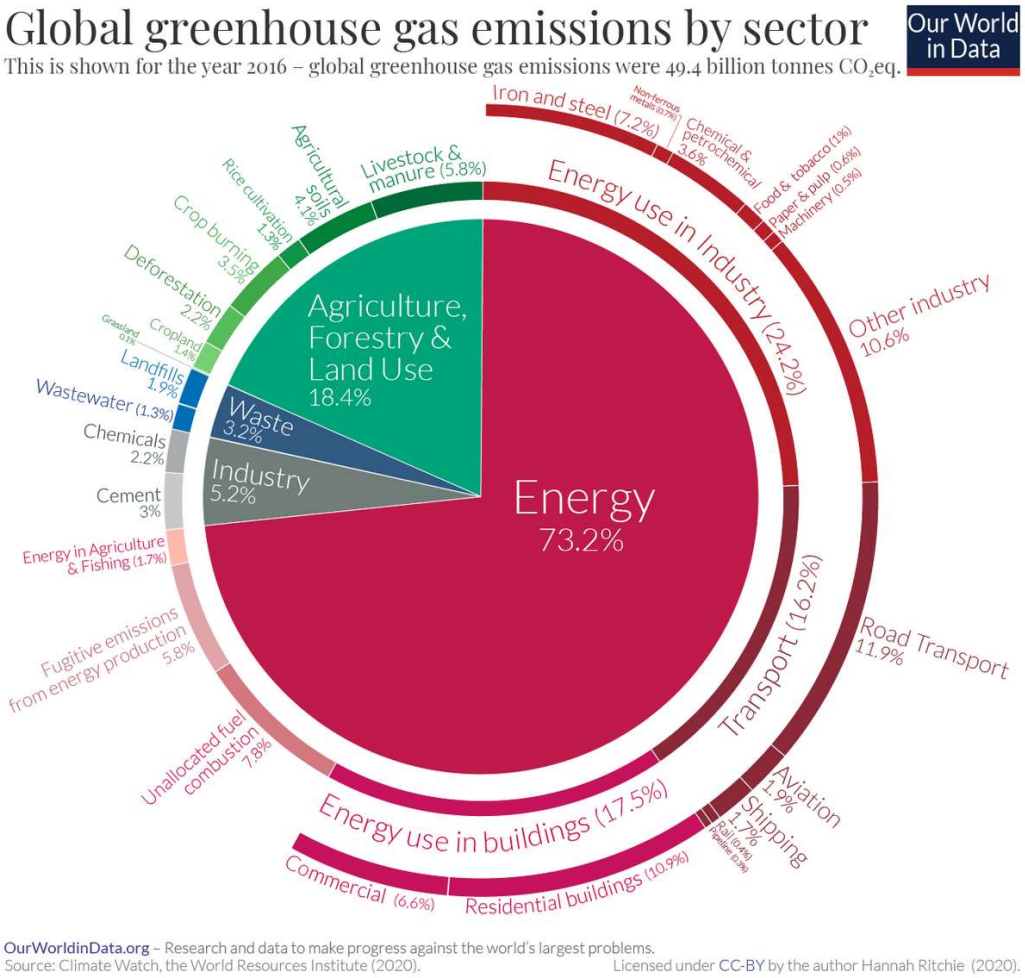
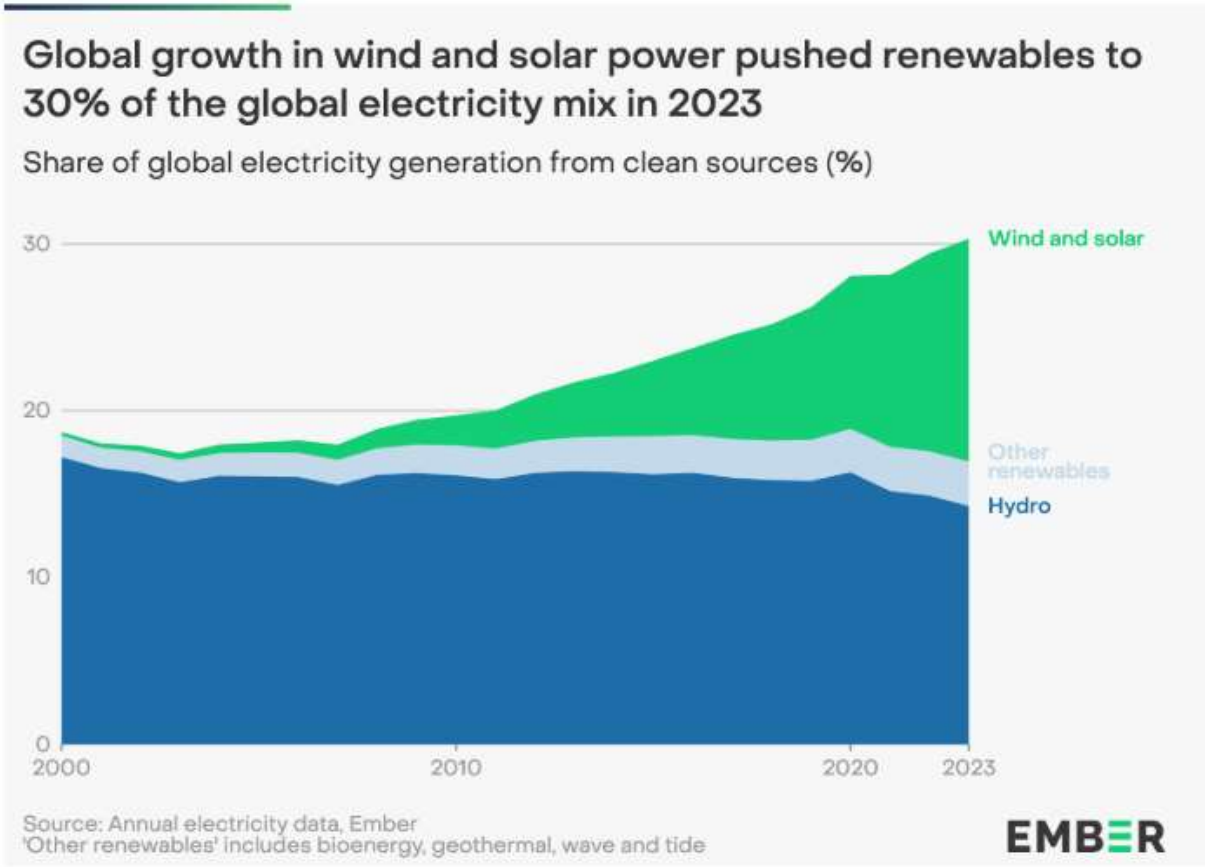
Which sector contributes the most emissions?

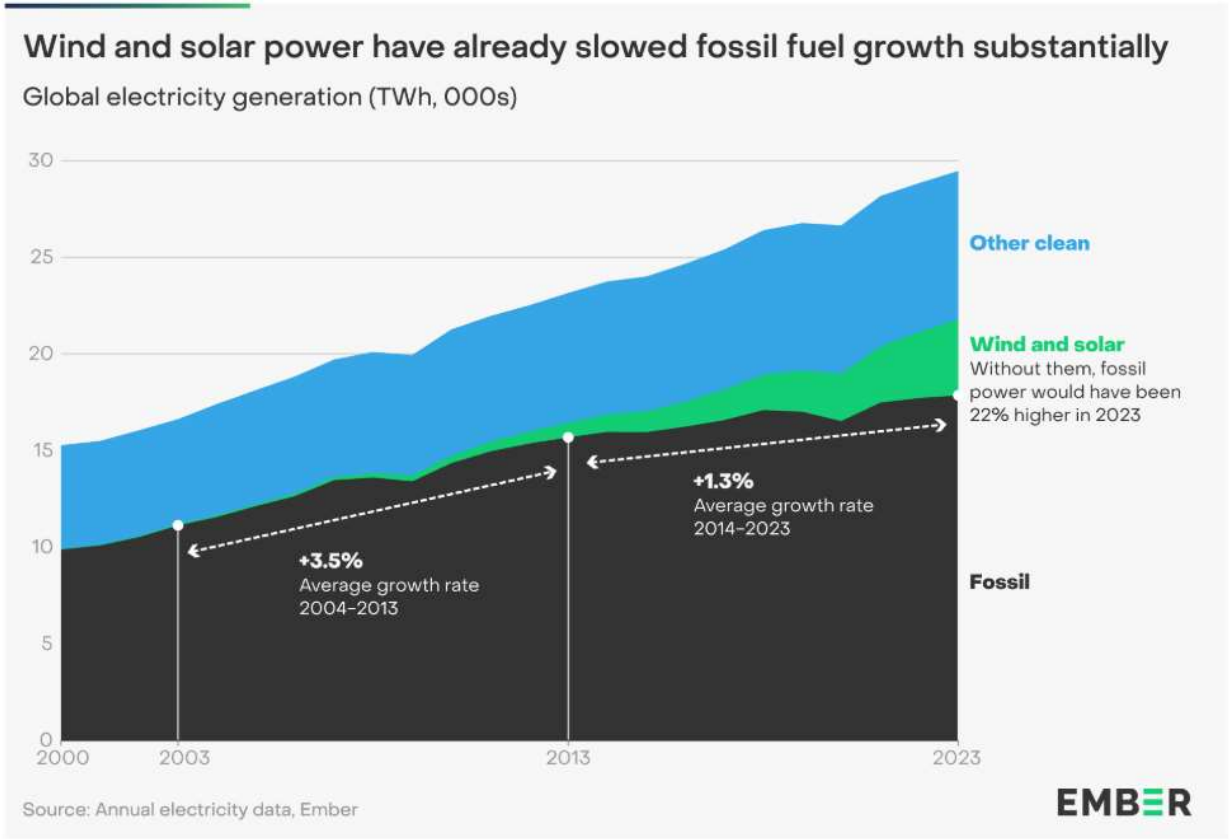


Solar PV and wind as renewables king and queen



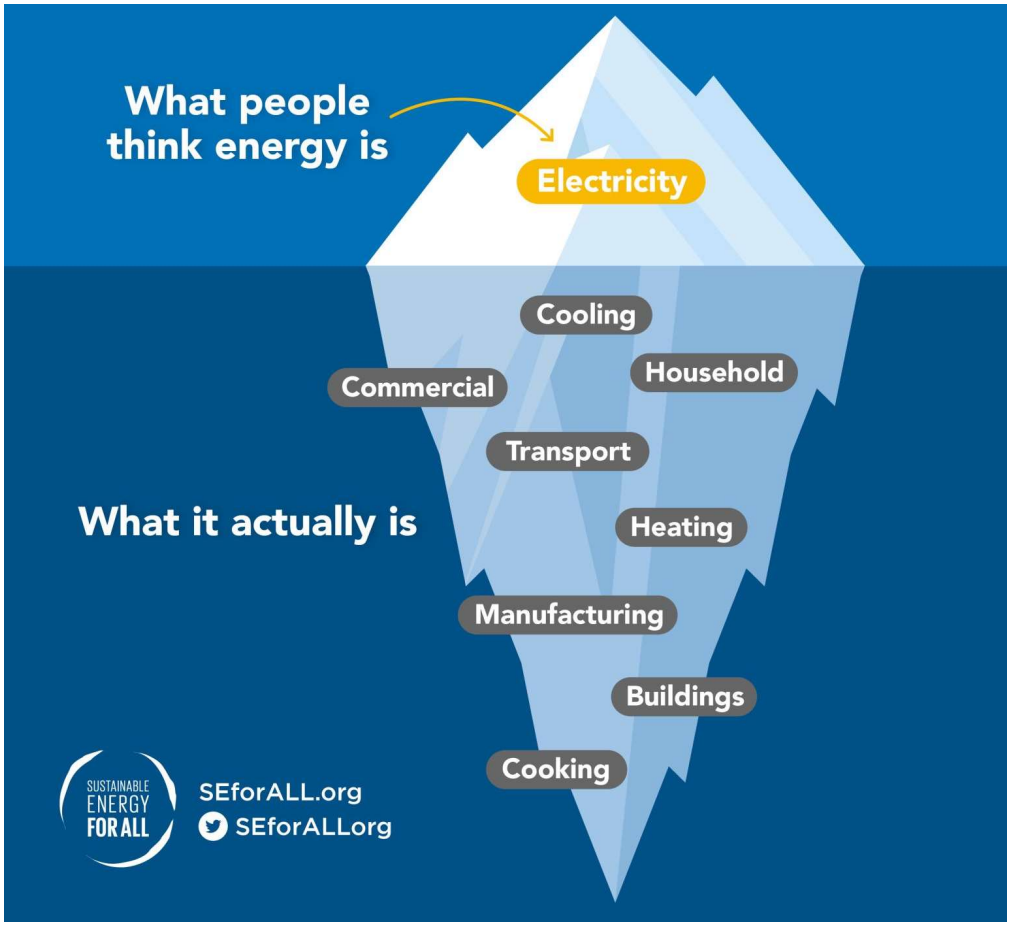
Renewables in power sector reaching 30%

Fossil fuels slowing down in power sector



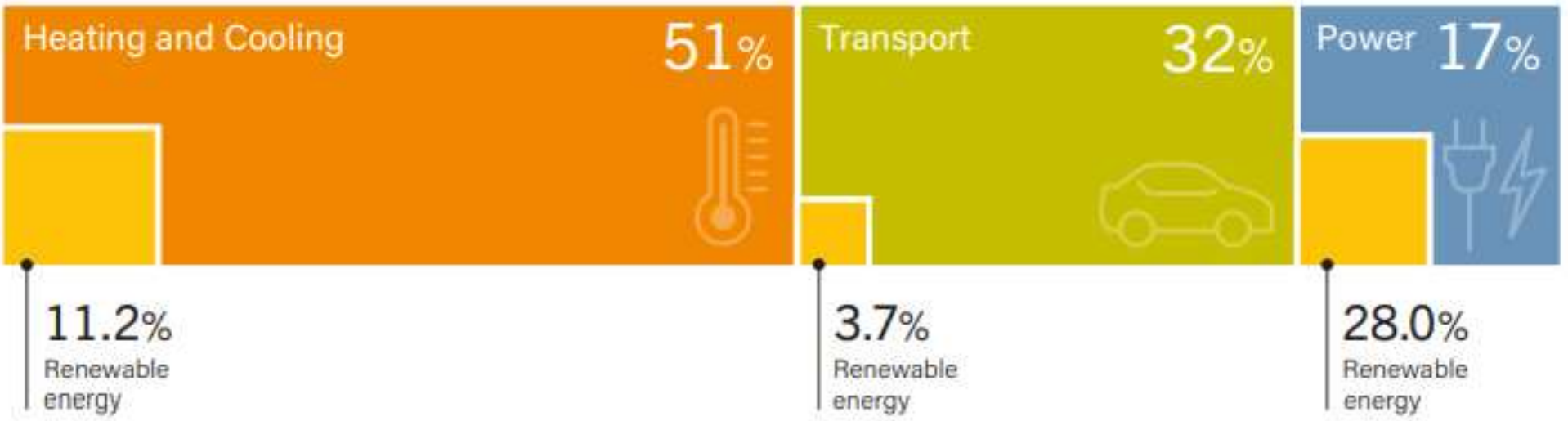
Slowing growth of fossil fuels but not halting

Energy vs electricity

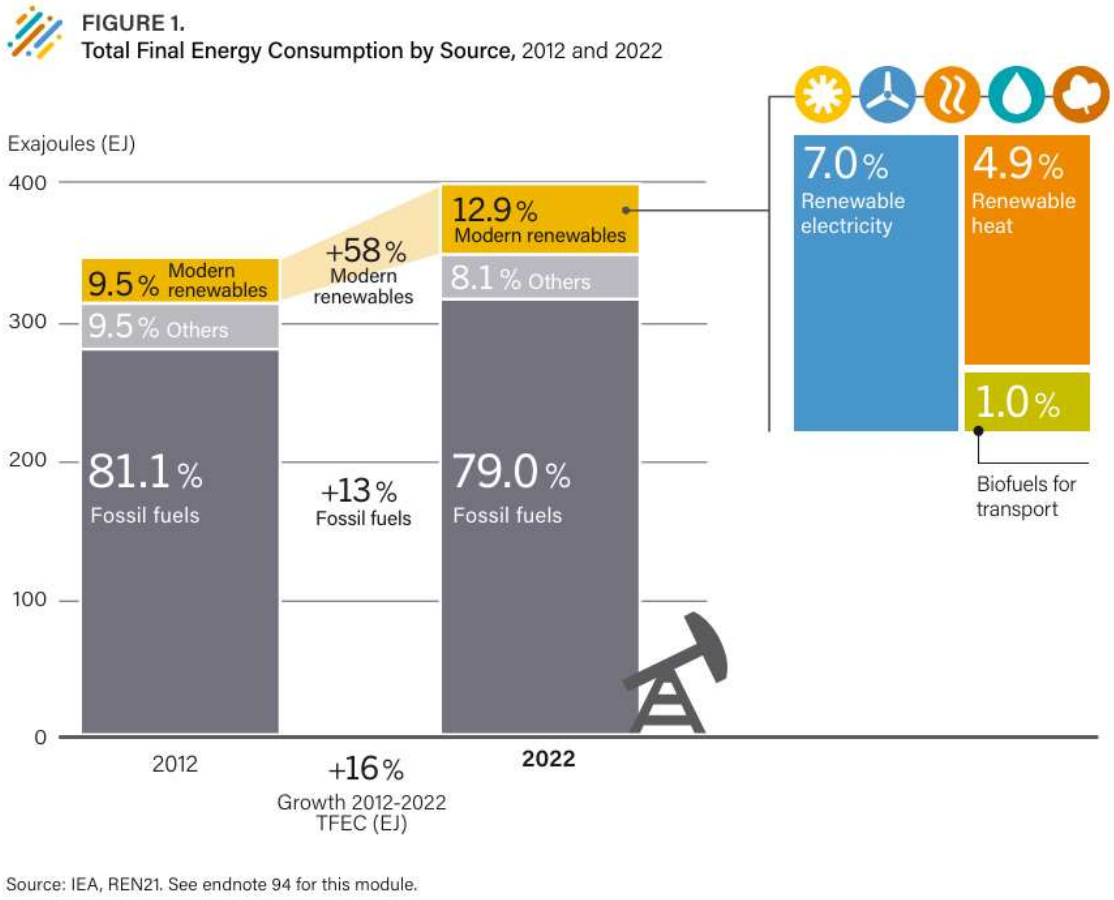


Energy sector deep-dive

Renewable Energy in Total Final Energy Consumption, by Final Energy Use, 2019



Where are we today?

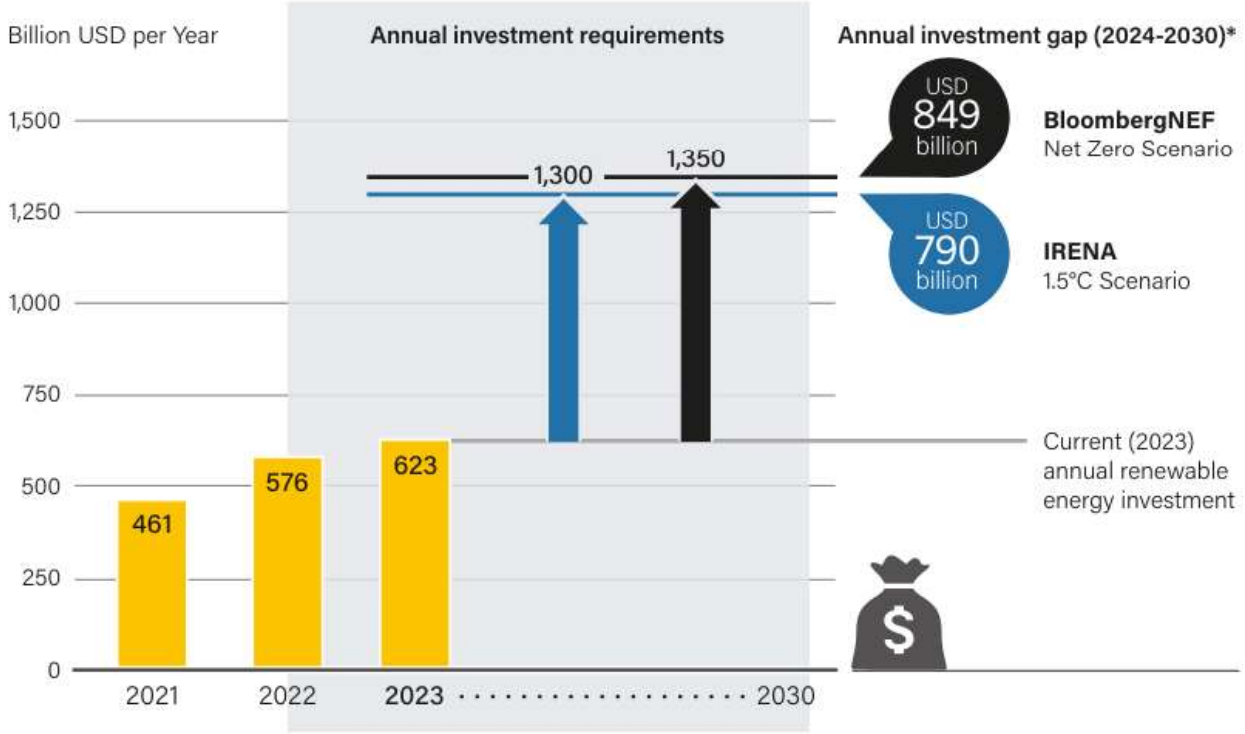


Source: IEA, REN21. See endnote 94 for this module.

We are burning more fossil fuels than ever

Where we need to be?

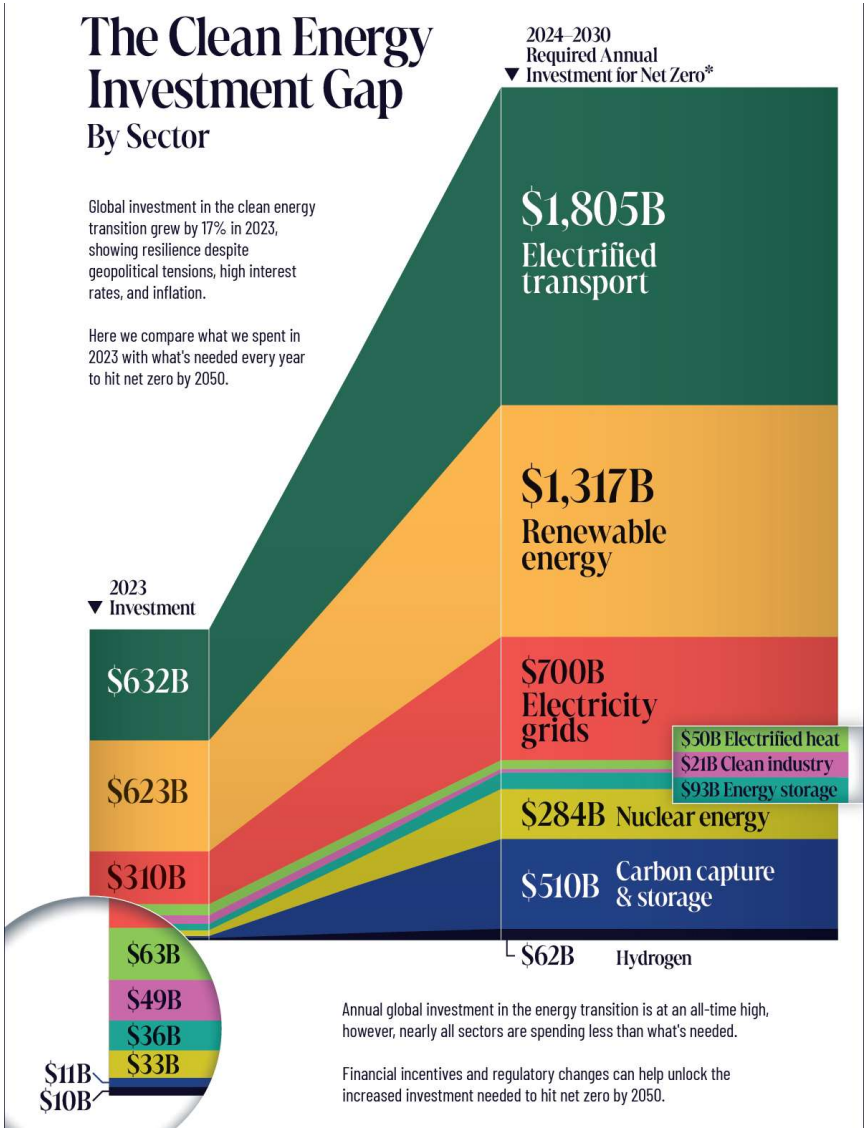
FIGURE 12.
Range of Annual Renewable Energy Investment Needed in Climate Change Mitigation Scenarios, Compared to Recent Investments



Annual investments need to more than double

Where we need to be?

Global investments in the clean energy transition grew by 17% in 2023



Who is responsable for the climate crisis?

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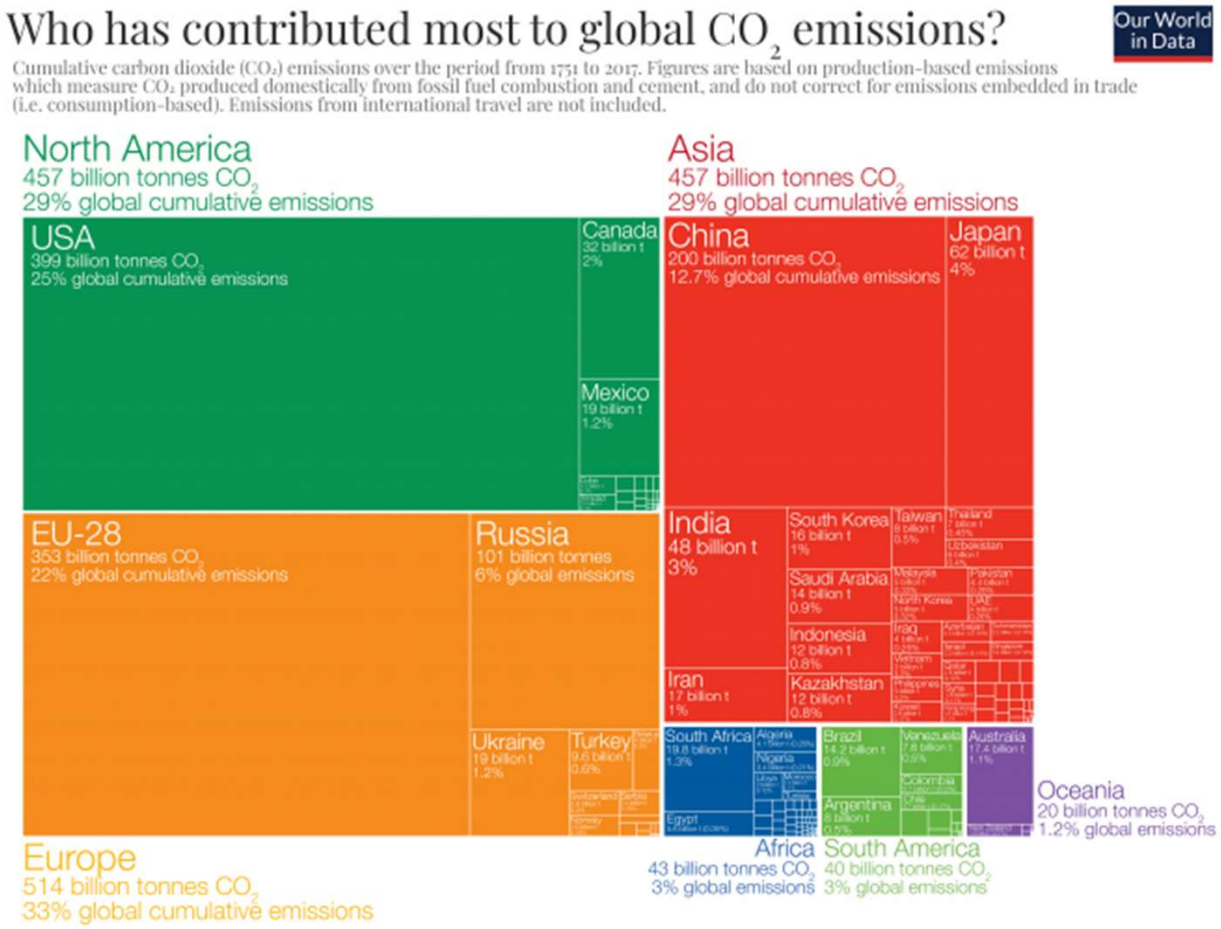
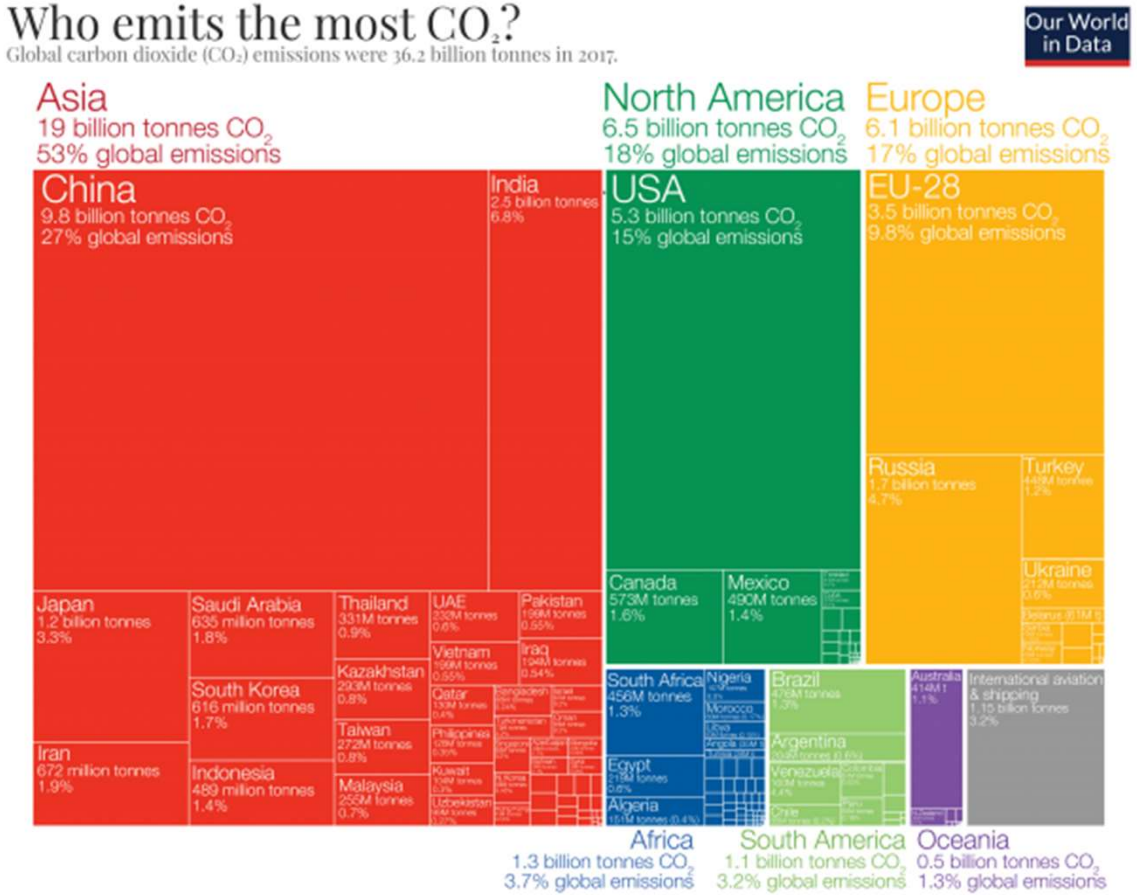
Who is responsible for climate change?



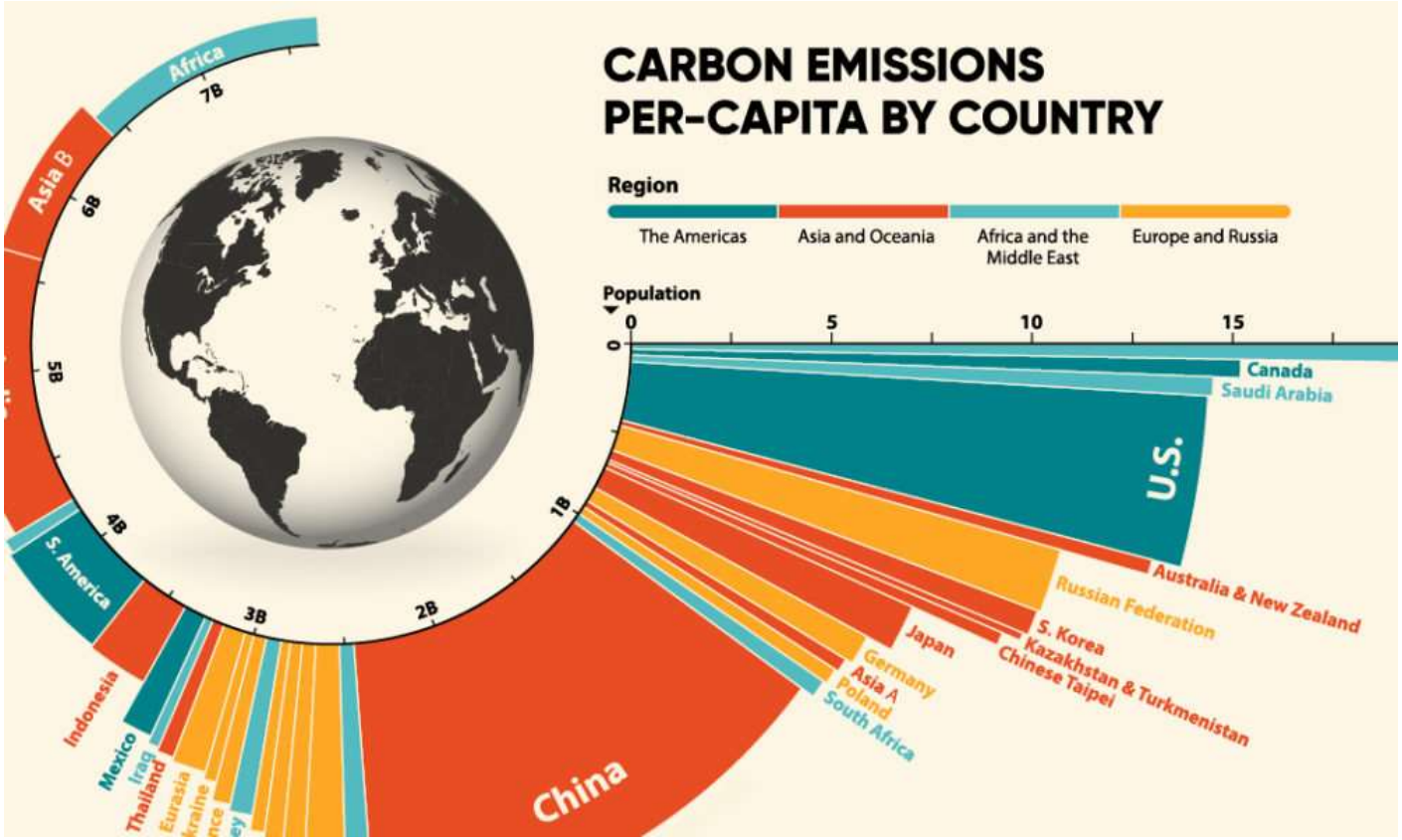
Historic emissions

Who is responsible for climate change?



Annual emissions

Who is responsible for climate change?

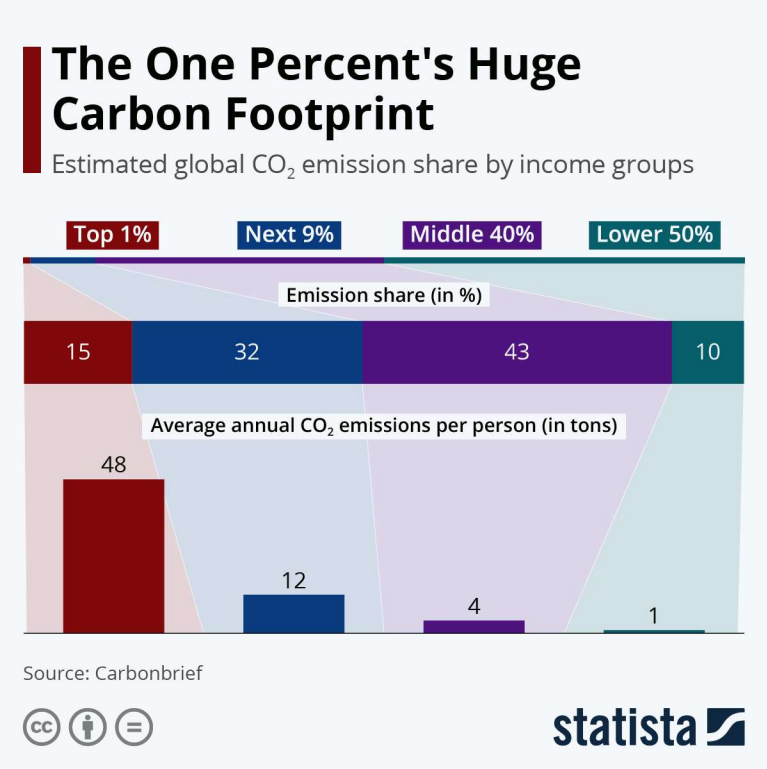


Per capita emission

Who is responsible for climate change?

iea

The world's top 1% of emitters produce over 1 000 times more CO2 than the bottom 1%



A billionaire emits a million times more greenhouse gases than the average person

10 solutions to mitigate climate change

Deep-dive: opportunities for cities

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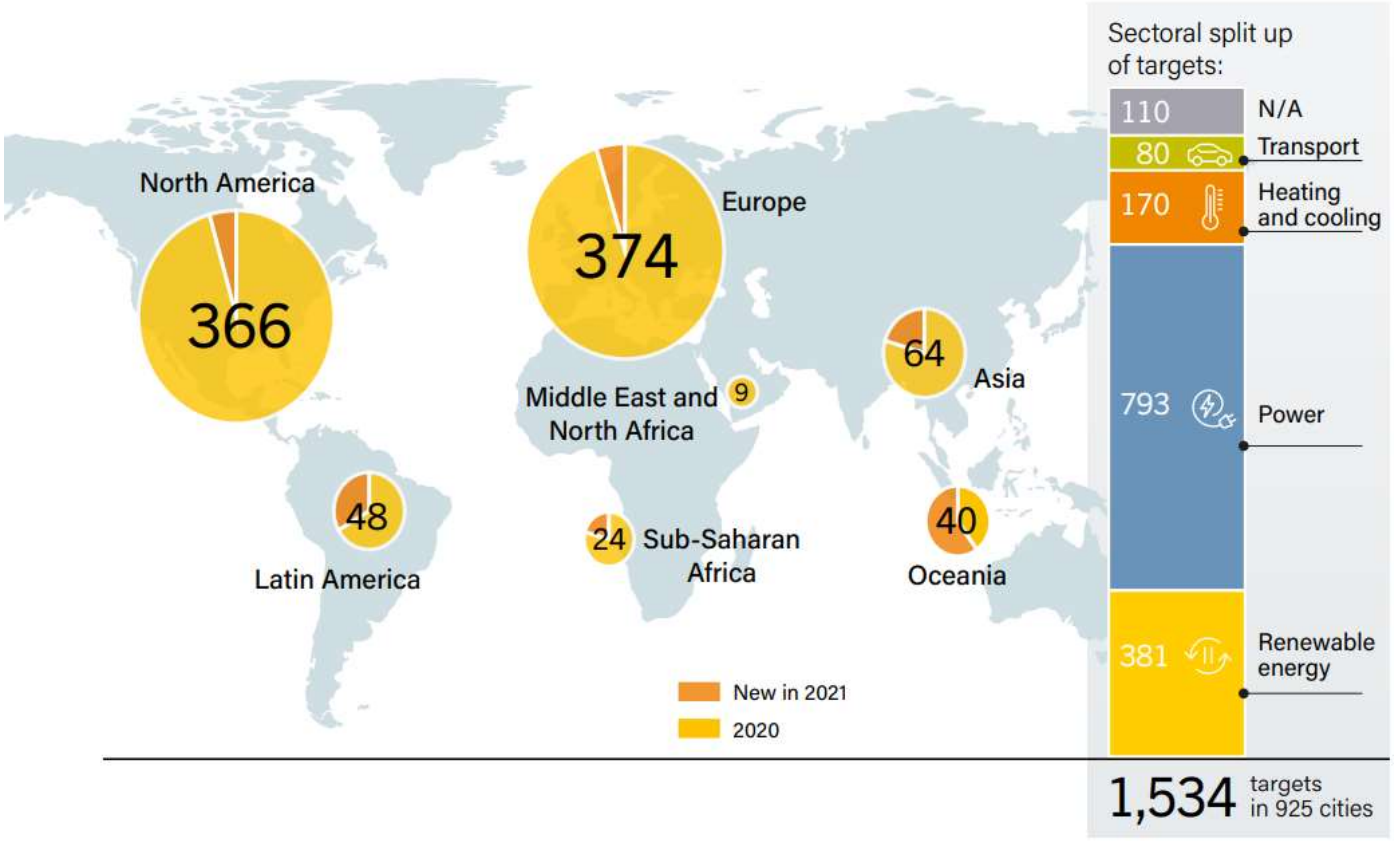
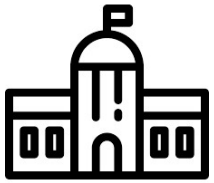
Renewable energy targets in cities



Cities using own assets and procurement



Cities **lead by example:** including sustainability and renewables in purchasing decisions

Installing renewable energy for the city's own operations	Using purchasing agreements	Retrofitting existing houses as part of urban regeneration efforts	Shape municipal (energy) infrastructure

EXAMPLE: Helsinki, Finland

Innovative mechanism to overhaul district heating

Cities setting policies for buildings

Passing mandates requiring minimum performance on energy and renewables – especially for new buildings

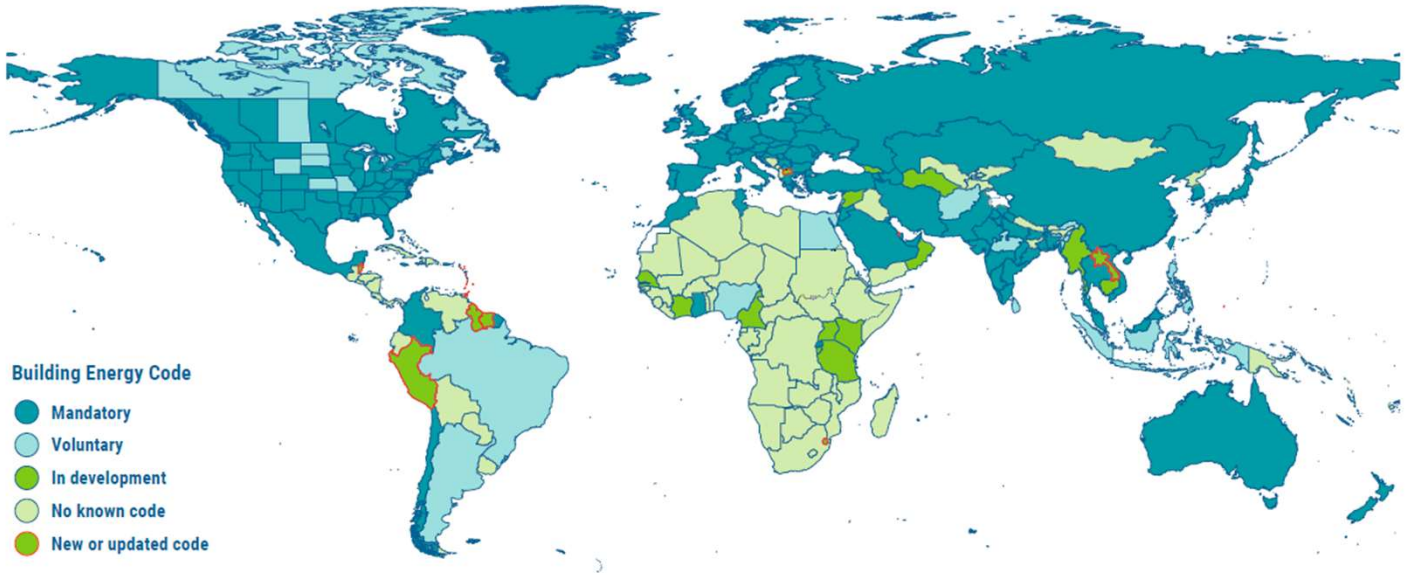
Building codes and mandates (typically for new buildings)

Providing **fiscal and financial incentives** for retrofitting, energy efficiency measures and renewables

Banning or restricting the use of oil, gas, coal

STATUS: Energy building codes are not advancing

Figure 5. Building energy codes by country/state



Source: Global ABC/ IEA

Only 43 countries have mandatory building energy codes

EXAMPLE: Berlin, Germany

Solar mandate for new residential buildings and for renovations

EXAMPLE: Berkeley, USA

First city to prohibit gas infrastructure

Cities decarbonizing transport

Decarbonising municipal fleets and public transport

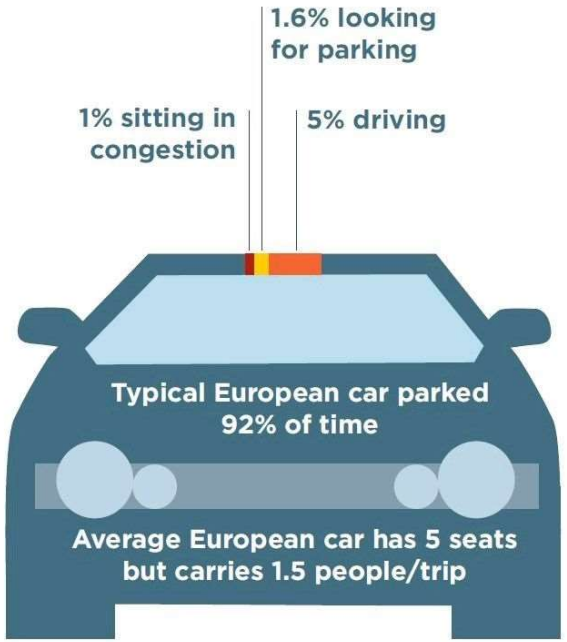
Mandates requiring EV chargers in new buildings

Fiscal and financial incentives for purchase of monthly public transport, new electric vehicle

Establishing low-emission zones

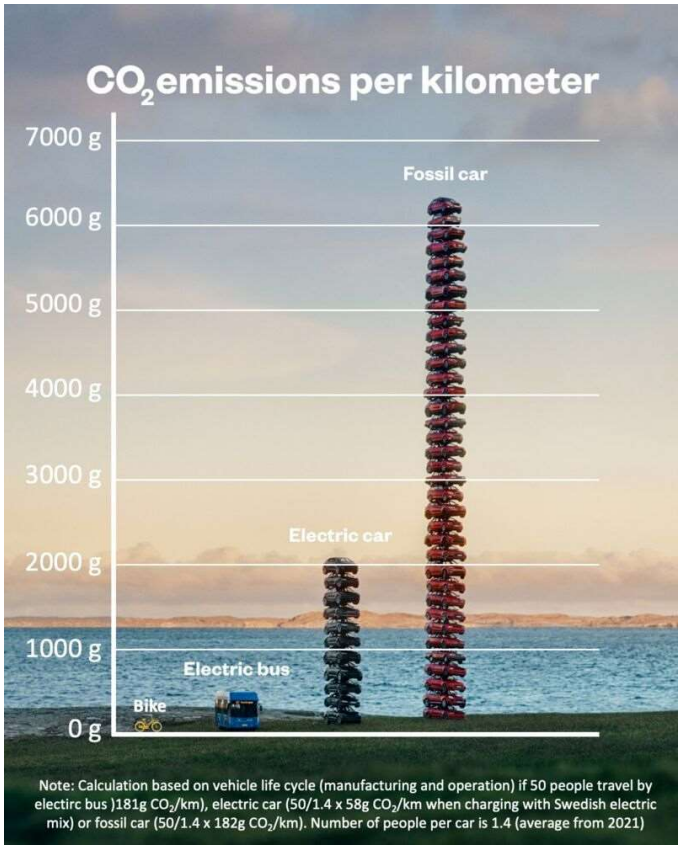
Improving walking and biking infrastructure

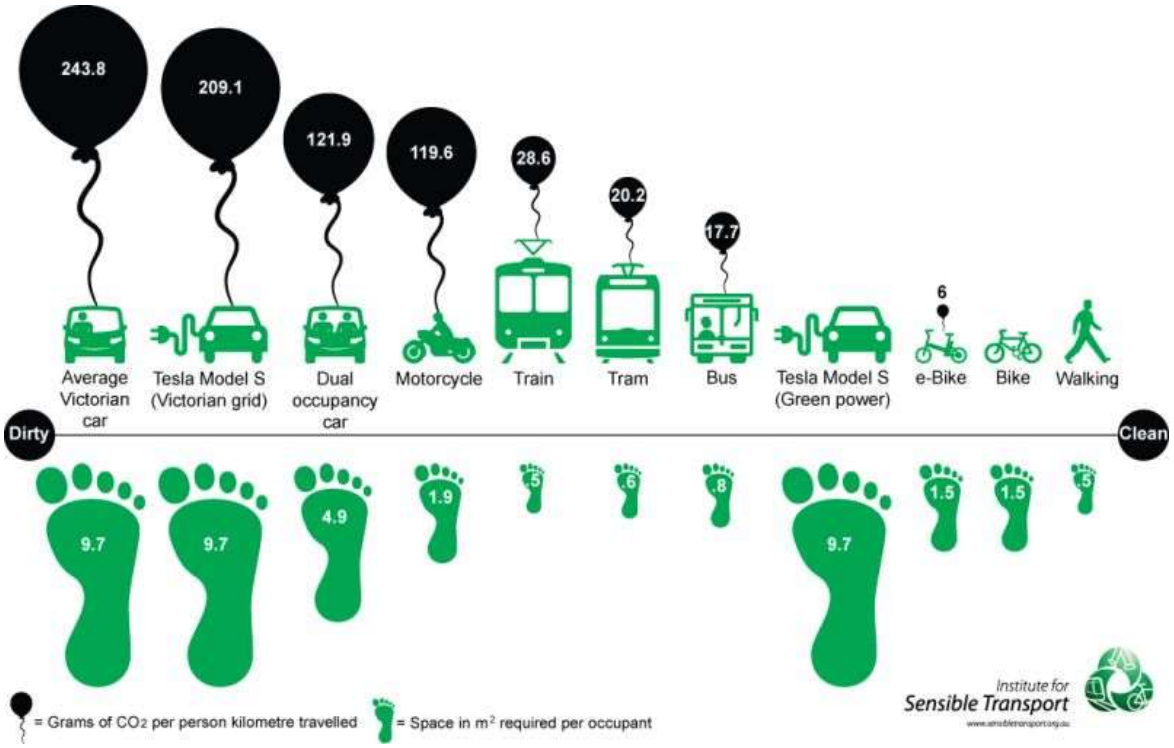
How much does a car actually move?



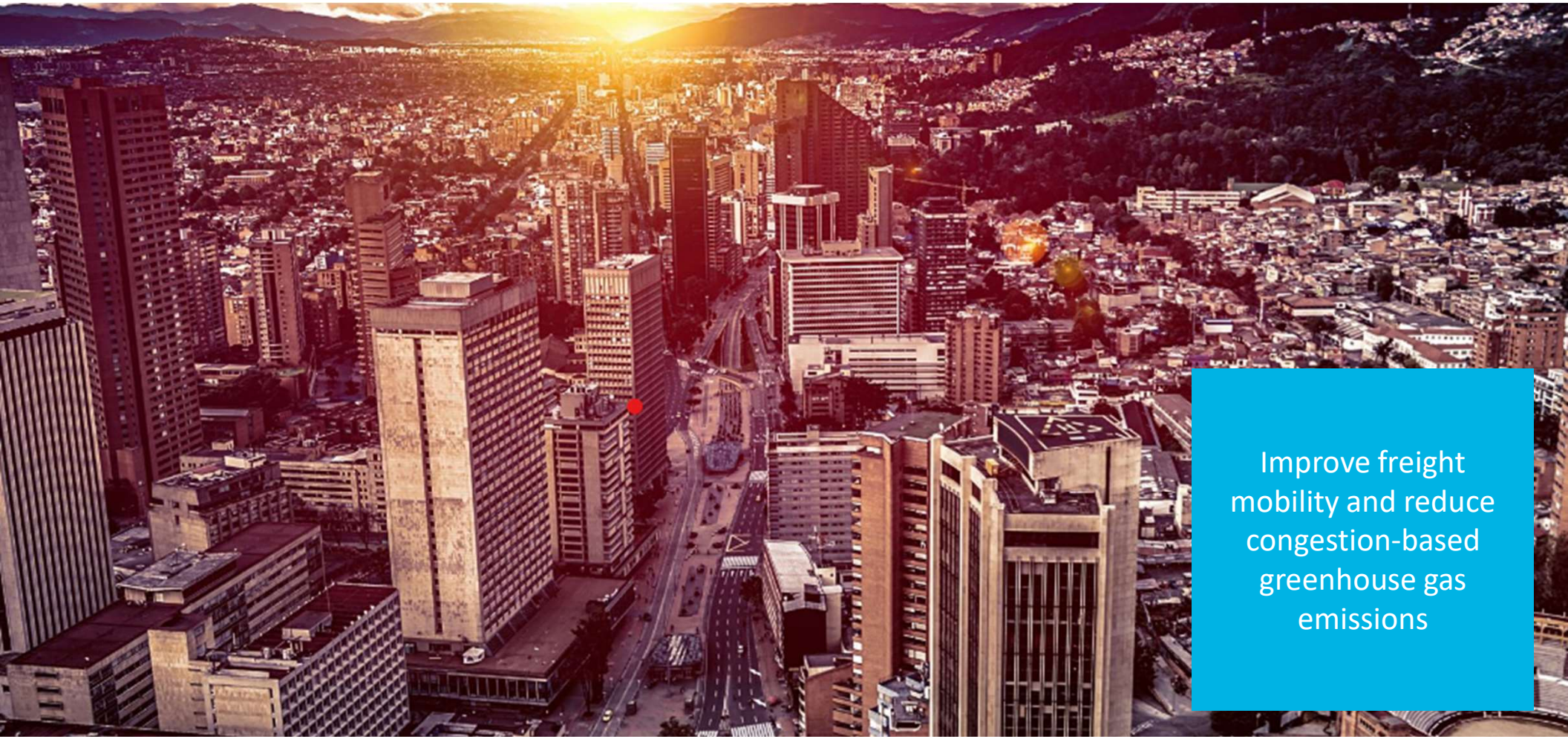
From the report *"Growth Within: A circular economy vision for a competitive Europe"* by the *Ellen MacArthur Foundation*

CO2 emissions in transport



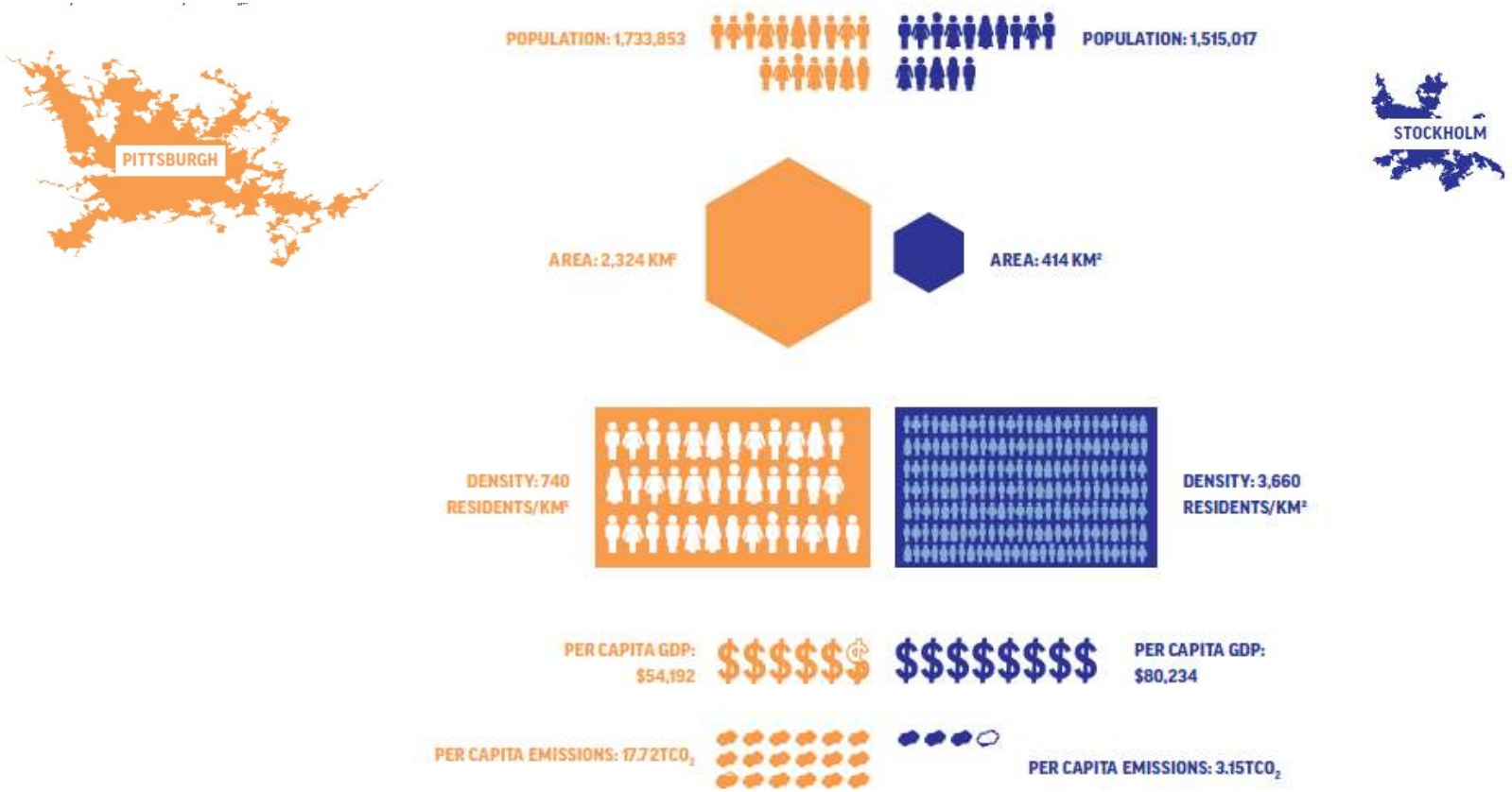


EXAMPLE: Bogota, Colombia



Improve freight mobility and reduce congestion-based greenhouse gas emissions

EXAMPLE: urban sprawl Pittsburgh vs Stockholm



How can we communicate better about renewables?

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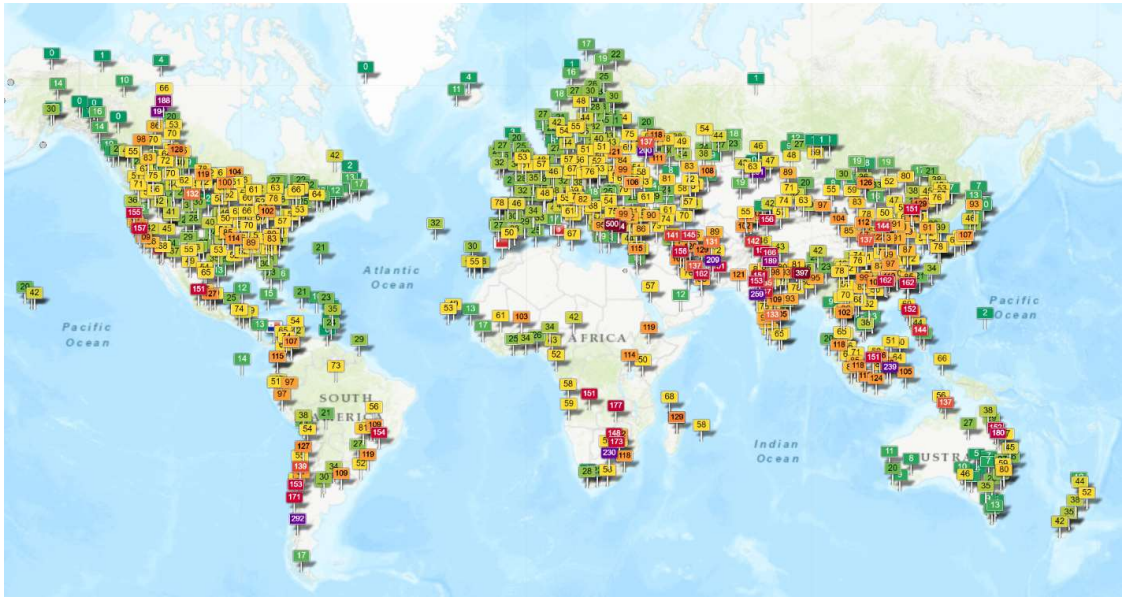
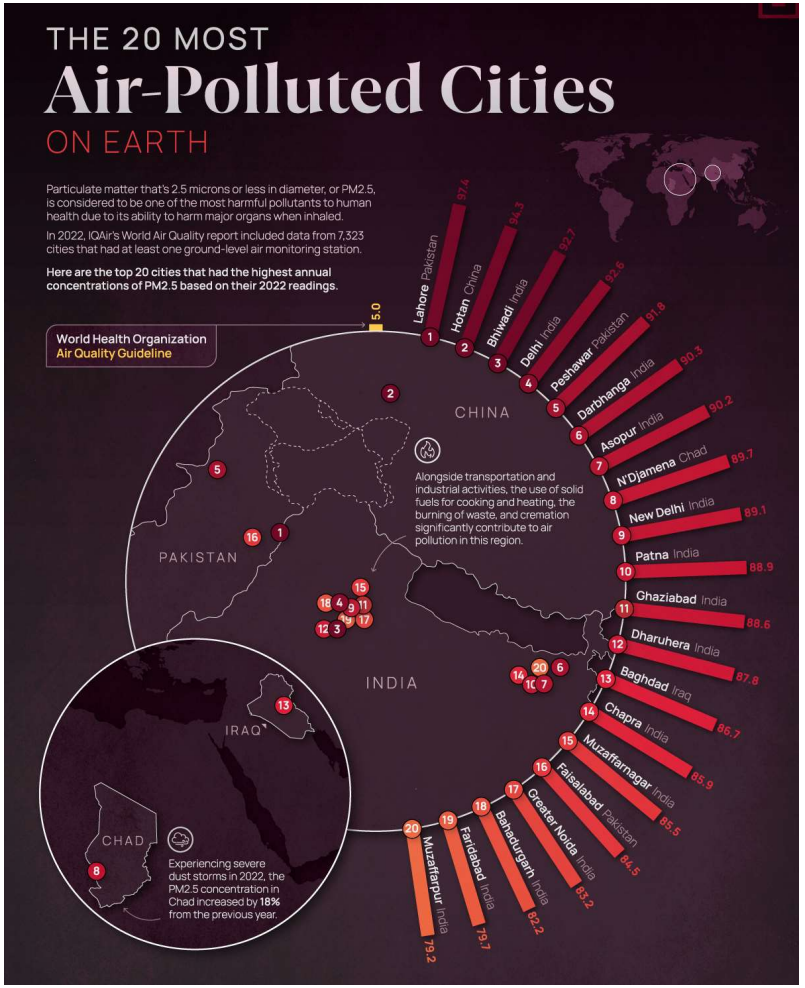
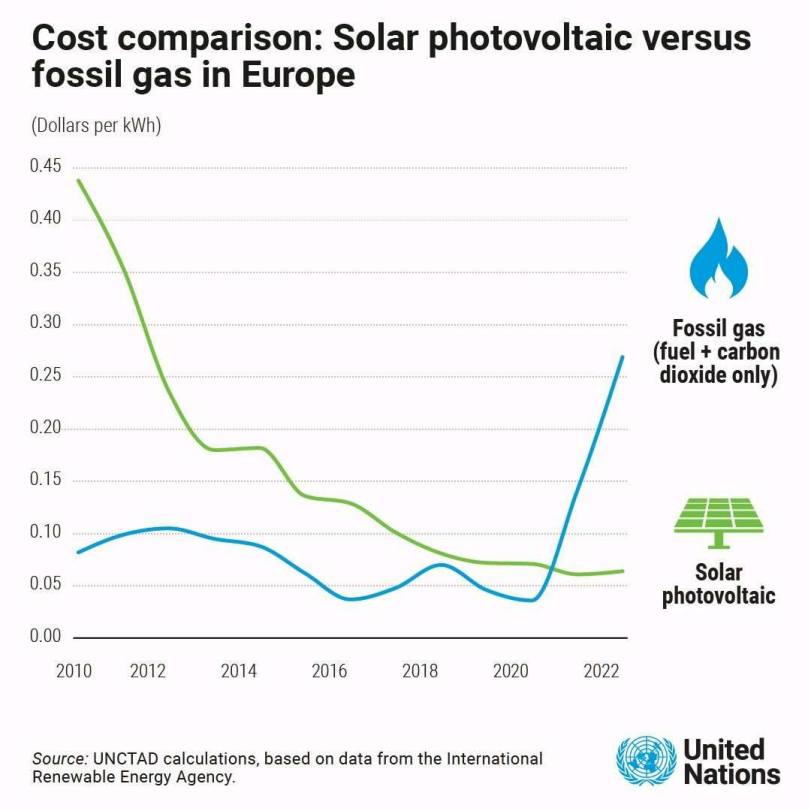
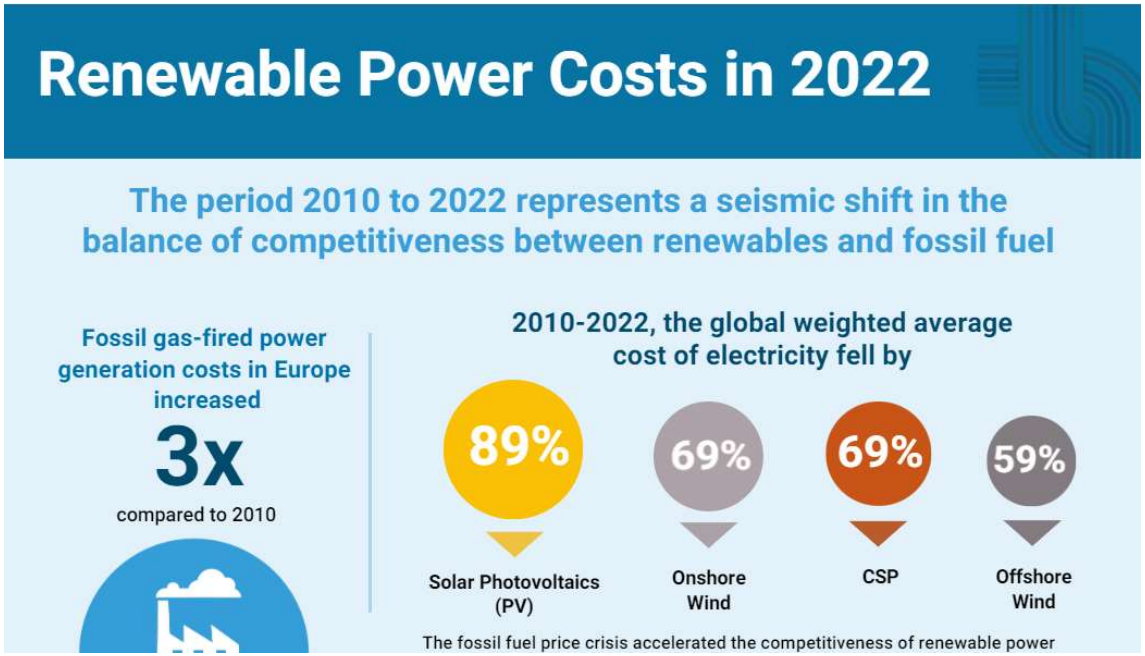
Co-benefits: combatting air pollution





Co-benefits: controlling municipal costs

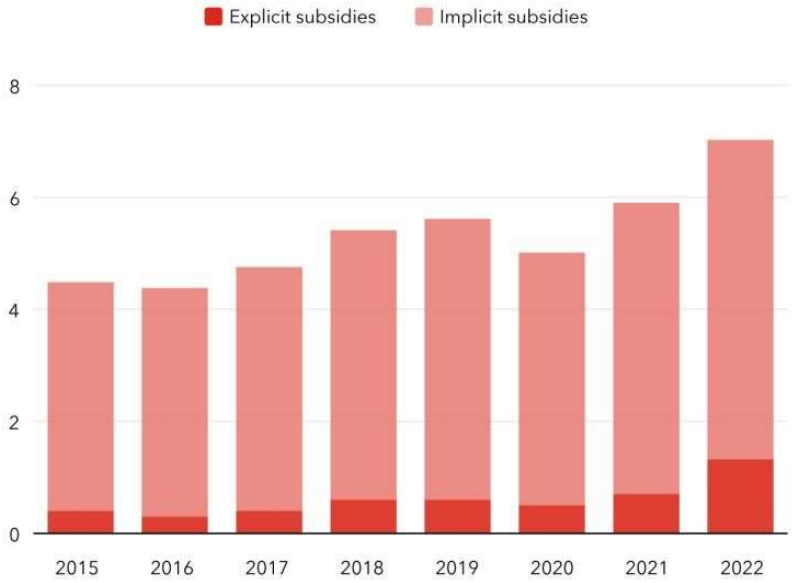




Reducing fossil fuel subsidies

Fossil fuel subsidies topped $7 trillion last year

(total fossil fuel subsidies, trillions of USD)



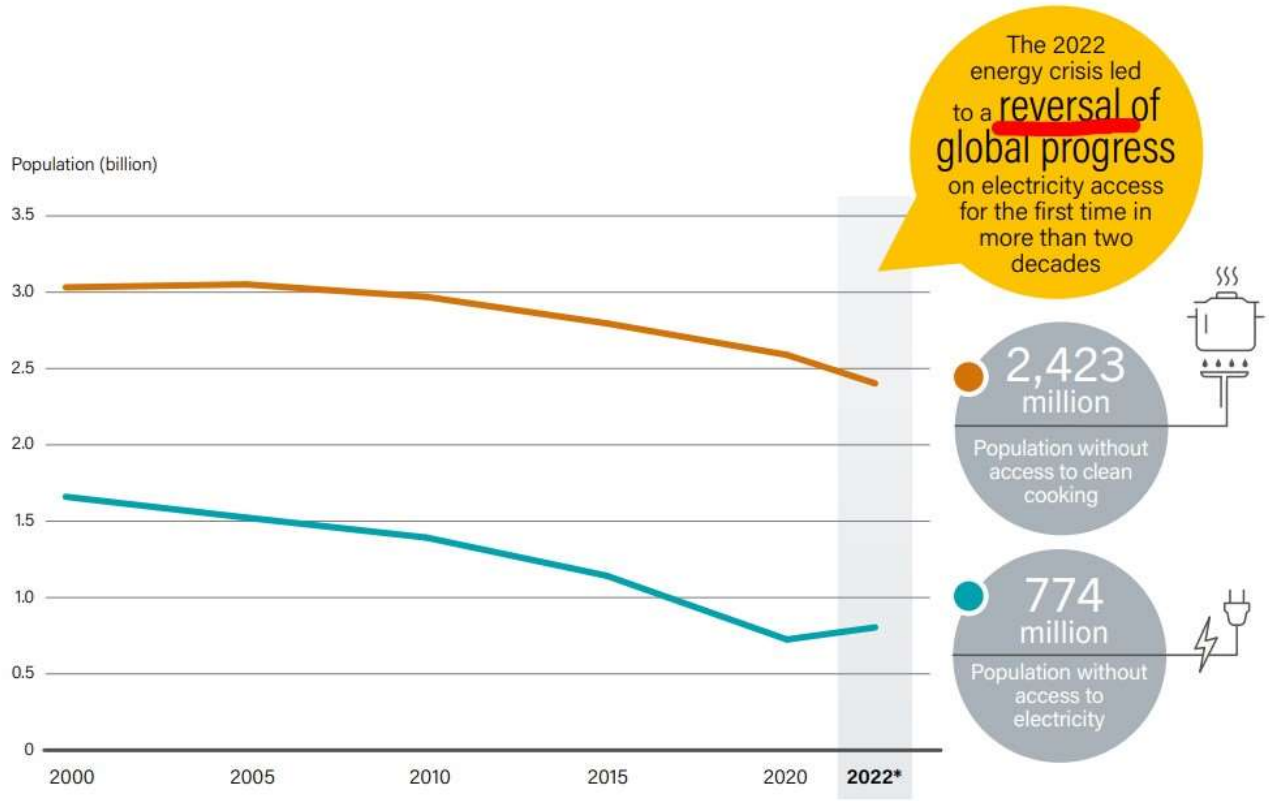
Source: IMF staff calculations.
Note: Figures from 2019 onwards use projections for fuel use. Explicit subsidies: undercharging for supply costs. Implicit subsidies: undercharging for environmental costs and forgone consumption taxes, after accounting for preexisting fuel taxes and carbon pricing.

IMF

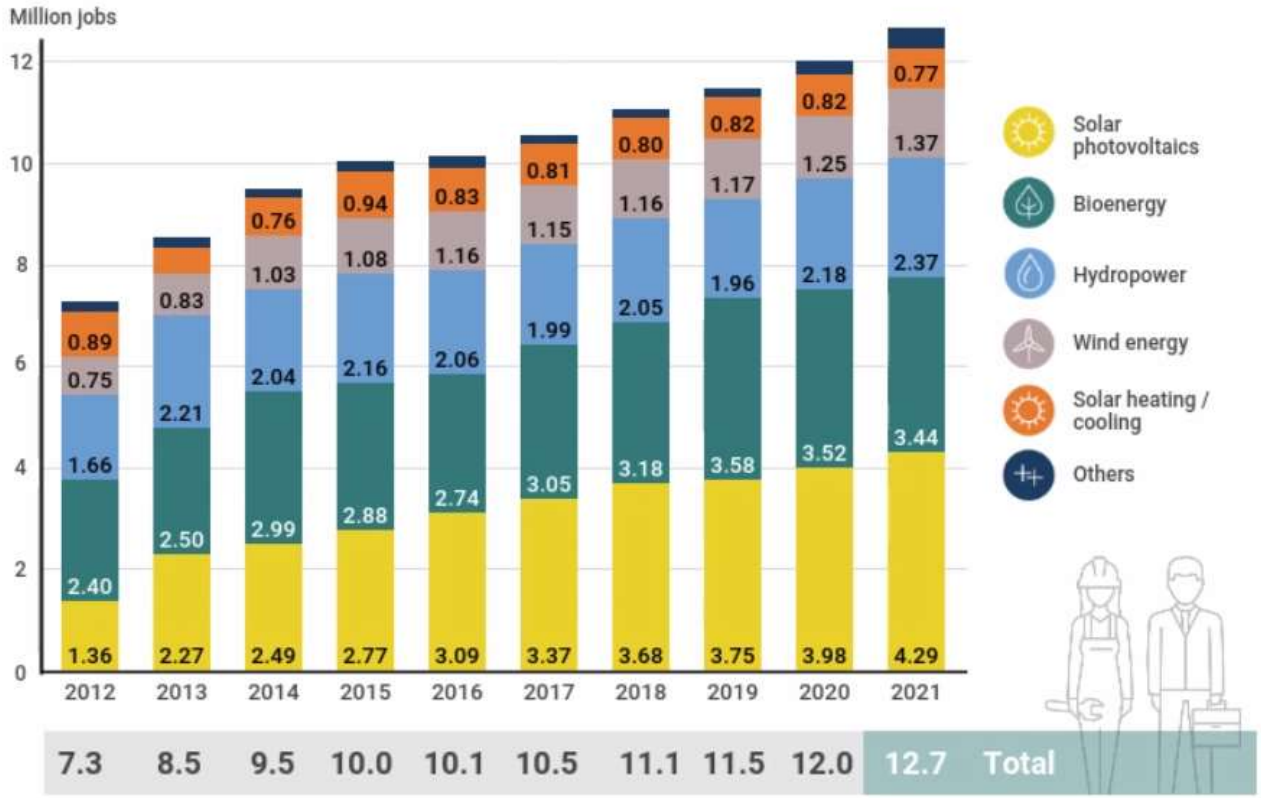
G20 poured more than $1tn into fossil fuel subsidies despite Cop26 pledges – report

Public money still flowing into industry despite agreement to phase out 'inefficient' subsidies, thinktank says

Co-benefits: addressing vulnerability



Co-benefits: local job creation



Source: IRENA Jobs database.

Evolution of global renewable energy employment by technology, 2012-2021

IRENA
International Renewable Energy Agency

Opportunities for youth in the Energy transition

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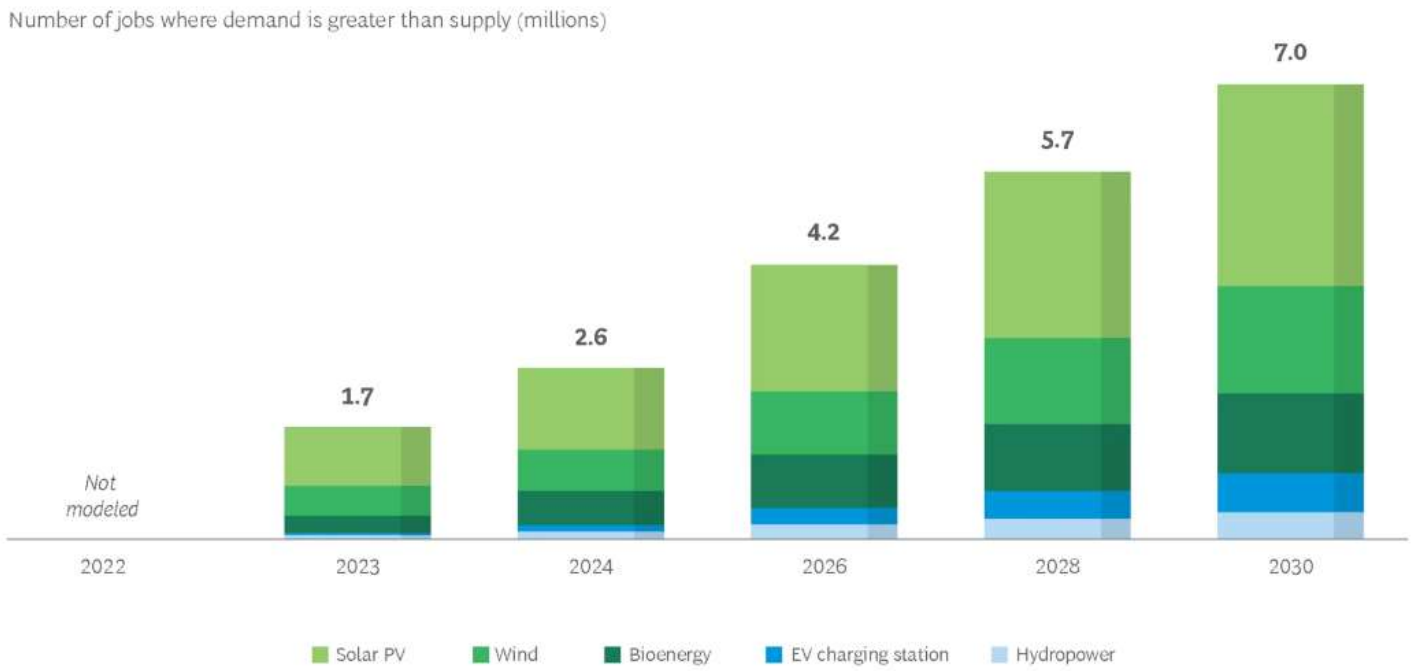
Skill gap is widening

Solar Is the Biggest Contributor to the 7 Million Person Skills Gap



Skill gap is widening

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Shortage of trained heat pump installers could set back net zero

07 July 2022 | In A sustainable future

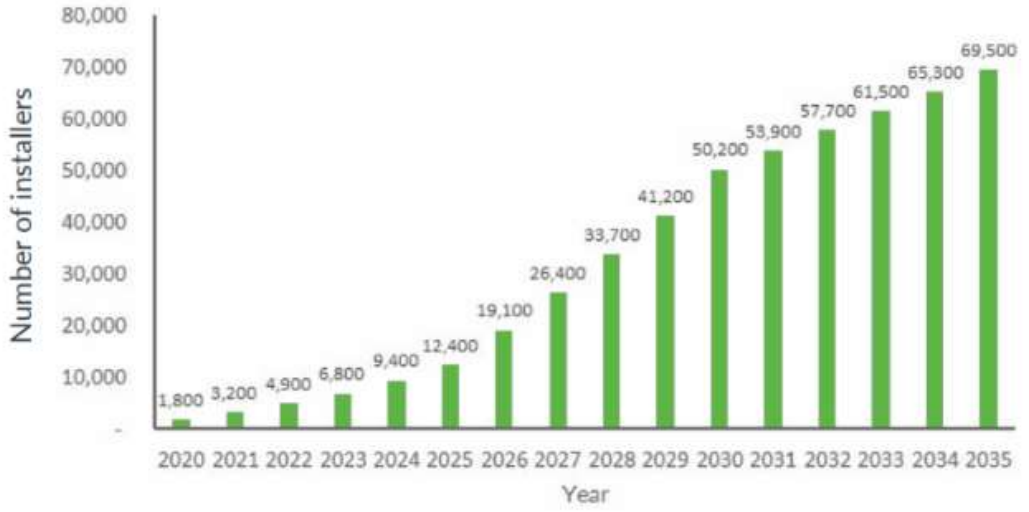

Figure 1: Potential number of heat pump installers needed each year, up to 2035 (HPA, 2020)

3,000 trained heat pump engineers in the UK, but at least least 27,000 will be needed in the next six years, requiring increases of 4,000-6,000 per year.

Any questions?

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IMPLEMENTING THE NEW URBAN AGENDA

11 SUSTAINABLE CITIES AND COMMUNITIES